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EXAMINER	
BOMAR, THOMAS S	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/758,309	KRUEGER, VOLKER	
	Examiner	Art Unit	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) *22-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 22-25 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the original invention did not encompass the following limitations of: superimposing a drill string rotation on the drill bit; positioning the center of the second stabilizer eccentric of a centerline of the wellbore such that gravity causes a pendulum effect for a drill string coupled to the drill bit, determining a deviation between a measured trajectory and a predetermined direction, and adjusting the center of the first adjustable stabilizer relative to the center of the second stabilizer in response to the measured deviation; or fixing a diameter of the second stabilizer while drilling a deviated section of the wellbore. Therefore, such newly presented limitations would be considered new species, wherein independent claim 21 is generic.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 22-25 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

2. Claims 11 and 26 are objected to because of the following informalities: the recitation of "altering said drilling direction" in claim 11 lacks proper antecedent, although it appears the Applicant meant for the claim to depend from claim 10; the recitation of "said first set of ribs" in claim 11 also lacks antecedent basis because this is only seen in claim 4, and none of claims 9-11

depend from claim 4; the recitation of "a second set of ribs" in claim 26 lacks proper antecedent basis because a first set has not been claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,220,963 to Patton.

Regarding claim 1: Patton discloses a method for controlling the trajectory of a wellbore that involves the following steps:

- Conveying a drilling assembly **10** in the wellbore, said drilling assembly including a first adjustable stabilizer **82** and a second stabilizer **84**.
- Adjusting a position of a first center of said first adjustable stabilizer in the wellbore relative to a second center of said second stabilizer based on a desired wellbore trajectory (7:22-68).

Regarding claim 2: The second stabilizer comprises an adjustable stabilizer.

Regarding claim 3: The second stabilizer is a fixed blade stabilizer (8:1-9:30; this passage teaches that only one of the stabilizers needs to be adjustable).

Regarding claim 4: The adjustable stabilizer has a first set of ribs containing a plurality of independently controllable ribs **98** or **100**.

Regarding claim 5: The second stabilizer has a second set of ribs containing a plurality of independently controllable ribs **98** or **100** (the examiner notes that both of the stabilizers are described using the same reference numbers).

Regarding claim 6: The second stabilizer has an under-gage outer diameter. The examiner notes that the stabilizers are eccentric thus would be under-gage.

Regarding claim 7: The method further involves measuring inclination of one of (i) the drilling assembly or (ii) said wellbore (21:40-23:35).

Regarding claim 8: The method further involves drilling said wellbore along a predetermined well path (21:40-23:35).

Regarding claim 9: The method further involves determining a parameter indicative of direction of drilling of said wellbore (21:40-23:35).

Regarding claim 10: The method further involves altering drilling direction of said wellbore if said parameter is outside a predetermined limit (21:40-23:35).

Regarding claim 11: The altering said drilling direction includes altering force applied by at least one rib in said first set of ribs (21:40-23:35).

Regarding claim 12: The method further involves adjusting the position of the second stabilizer by adjusting the extension of at least one rib of said second set of ribs (21:40-23:35).

6. Claims 1-6, 8, 12-16, 20, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,213,226 to Eppink et al.

Regarding claim 1: Eppink et al disclose a method for controlling the trajectory of a wellbore that involves the following steps:

- Conveying a drilling assembly **270** in the wellbore, said drilling assembly including a first adjustable stabilizer **10/278** and a second stabilizer **204/276**.
- Adjusting a position of a first center of said first adjustable stabilizer in the wellbore relative to a second center of said second stabilizer based on a desired wellbore trajectory (see Figs. 34-39 and associated description).

Regarding claim 2: The second stabilizer comprises an adjustable stabilizer (22:6-13, wherein the fixed stabilizer 204 has been advantageously replaced with adjustable stabilizer 276).

Regarding claims 3, 14: The second stabilizer is a fixed blade stabilizer (21:30-33; this passage teaches that only one of the stabilizers needs to be adjustable).

Regarding claim 4: The adjustable stabilizer has a first set of ribs containing a plurality of independently controllable ribs **40/42** (22:56-65).

Regarding claims 5, 15: The second stabilizer has a second set of ribs containing a plurality of independently controllable ribs **40/42** (the examiner notes that both sets of ribs are described using the same reference numbers).

Regarding claims 6, 16: The second stabilizer has an under-gage outer diameter (see claim 6).

Regarding claim 8: The method further involves drilling said wellbore along a predetermined well path (1:5-10).

Regarding claim 12: The method further involves adjusting the position of the second stabilizer by adjusting the extension of at least one rib of said second set of ribs (see Fig. 39).

Regarding claims 13, 21: Eppink et al disclose a system for controlling a trajectory of a wellbore. The system includes the following features:

- A drilling assembly **270** deployed in said wellbore by a rotatable tubular member, said drilling assembly including a drill bit at an end thereof that is rotatable by a drilling motor (22:62-65) carried by the drilling assembly.
- A first adjustable stabilizer **10/278** disposed in said drilling assembly having a first set of ribs **40/42** spaced around said first adjustable stabilizer, with each rib being independently radially extendable.
- A second stabilizer **204/276** spaced apart from said first adjustable stabilizer.

- A controller in the drilling assembly adjusting the position of a first center of the first adjustable stabilizer in the wellbore relative to a second center of the second stabilizer in the wellbore for controlling the trajectory of the wellbore wherein the position of the first center relative to the second center is determined at least in part upon a desired wellbore trajectory stored in the controller in the drilling assembly (see Figs. 34-39 and 16:50-63). Wherein the center of the first stabilizer is adjusted relative the center of the second stabilizer since both stabilizers begin in the center of the drilling assembly, and are thus centered relative to each other. When one of the stabilizers moves, then its center must be adjusted relative to the center of the other. Whether or not this event is specifically recited in the patent is irrelevant because the adjustment of one center relative to another will happen due to the adjustability of the stabilizers.

Regarding claim 20: The position of the second stabilizer is adjusted by changing the extension of at least one rib of said second set of ribs (see Fig. 39).

Regarding claim 26: The adjustable stabilizer has a first set of ribs containing a plurality of independently controllable ribs **40/42** to control drilling direction (22:56-65).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 7, 9-11, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eppink et al in view of Patton.

Eppink et al teach the method and system of claims 1 and 13 for controlling the trajectory of a wellbore. However, it is not specifically taught that the method or system includes a sensor for measuring inclination or determining a parameter indicative of direction of drilling of said wellbore so that drilling direction of said wellbore can be altered if said parameter is outside a predetermined limit.

Patton teaches a method and system for controlling the trajectory of a wellbore similar to that of Eppink et al. It is further taught that the method or system includes a sensor for measuring inclination and/or for determining a parameter indicative of direction of drilling of said wellbore so that drilling direction of said wellbore can be altered if said parameter is outside a predetermined limit (21:40-23:35; also see the rejection of claims 7-11 in view of Patton above). It would have been obvious to one of ordinary skill in the art, having the teachings of Eppink et al and Patton before him at the time the invention was made, to modify the method and system taught by Eppink et al to include the sensors and methods of measuring of Patton, in order to obtain a calculated drill profile (23:3-19 of Patton). One would have been motivated to make such a combination since Eppink et al is silent to the directional control system electronics and sensors, although one of ordinary skill in the art knows that the directional drilling could not be accomplished without some sort of sensors to determine inclination and direction of the downhole components, which Patton have shown to be notoriously known.

Response to Arguments

9. Applicant's arguments filed May 12, 2006 with respect to claim 1 rejected in view of Patton have been fully considered but they are not persuasive. The center of the first stabilizer is adjusted relative the center of the second stabilizer since both stabilizers begin in the center of the drilling assembly, and are thus centered relative to each other. When one of the stabilizers moves, then its center must be adjusted relative to the center of the other. Whether or not this event is specifically recited in the patent is irrelevant because the adjustment of one center relative to another will inherently happen due to the adjustability of at least one of the stabilizers.

10. Applicant's arguments, see pages 9-10, filed May 12, 2006, with respect to the rejection(s) of claim(s) 13 under 35 USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Eppink et al.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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tsb
July 20, 2006

William Neuder
Primary Examiner